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SATURDAY, AUGUST 17, 1839.

SILK.

Mr. Pollok, the proprietor of the Glovan Silk Mills, near Glasgow, unable to procure the raw silk required at his establishment, has determined to become a producer, and has fixed on the vicinity of Danville, Virginia, as the location of his mulberry and cocoonery orchards and buildings. The superintendent and several hands have for some time been on the ground busily engaged in planting trees and erecting buildings. Mr. Pollok, who has lately arrived, has brought with him some of the choicest varieties of the mulberry, and also of the grape, an extensive experiment in the culture of which, in connection with the mulberry, he is intending to make. Mr. P. is intending to produce annually on his farm $150,000 worth of the raw material for his foreign factory. We wish him success; as such examples cannot fail to turn the attention of mulberry growers to the growing of silk, a result much to be desired in this country.

Age of the Horse.

"P. L. P." of Ludlowville, has, in a number of querics, called our attention to that valuable animal, the horse, and requested information on some subjects that cannot well be illustrated without the aid of the proper engravings, to which reference can be made. These, it is our intention to procure; and with their aid we shall endeavor to give the readers of the Farmer some items of knowledge respecting this noble animal, that will be practically useful. In the mean time, the following remarks on the structure of the teeth, will show the foundation on which a knowledge of the age of the horse is obtained by attending to them.

Among dealers in horses, the front teeth, which are called *incisors* in other animals, are called *nippers*, as from the motion of the horse in eating, it is evident the grass is rather broken off than cut off by the teeth.—These teeth, six in number, are covered with a very hard substance called enamel, the base of which is phosphate of lime, and is so compact as almost to bid defiance to the best files. This enamel constitutes the outside of the tooth, and as it rises above the surface, is bent inward and apparently sunk into the body of the tooth, forming an indentation or pit, occupying the centre of the tooth, and the inside and bottom of this, being, during its existence, blackened by the food, constitutes the peculiar appearance or *mark* by which, until the tooth is much worn, the age of the horse can be determined. As the teeth, or nippers, are renewed at different times, the mark will be partially or entirely worn from some, while it will be entire on others; the difference in the wearing, until all are worn, is a criterion not liable to error. The hollow part never fills up, but remains there till the enamel is worn to the same level, when the wear of the whole tooth is nearly uniform.

The horse's mouth is not perfect, that is, all the teeth, nippers, tusks and grinders, have not made their appearance until he is about six years old. The wear is now operative on all, and the *mark* has disappeared from the central nippers. At seven years, the mark is worn out on the four central nippers, and is fast wearing from the outer ones. At eight years, the *marks* are all gone from the nippers of the under jaw, or the bottom ones; and there is nothing remaining on them which clearly indicates the age of the horse, or "which will justify the most experienced examiner in giving a positive opinion." Dealers, or horsemen, after the animal is eight years old, are accustomed to look at the nippers in the upper jaw, and some aid may be drawn from the appearances they present, as they do not at all times wear away with the regularity or the quickness of the lower nippers. Still the information they give after eight, cannot be implicitly relied on; and it is a common saying among jockeys, that a horse is never more than nine. Up to eight years of age, 'P. L. P.' can determine the age of his horse, later than that he must depend on his own or others knowledge, or on tradition.

JULY, 1838 and 1839.

	Tem. at 2 P. M.	Range.	Days clear.	Cloudy.	Vari'ble.	Rain.
1838	81	34	20	9	2	11
1839	76	36	16	7	8	12

It appears that the average temperature of the month of July for 1838 exceeds that of 1839 by 5°, and that the number of clear days was less this year by 4. The highest temperature observed last year was 93°, this year 91°. In nothing has the diminution of temperature for June and July of this year been more observable than in the effect on the corn, which is now, August 3d, at least 15 days later than it was last year. This difference in time, even should August be as favorable as last year, greatly diminishes the chance of a good corn crop; indeed, July may be said to have decided that the corn crop cannot be a heavy one, although there are many fine fields in nearly all our districts. We much fear the result of this year will go to prove the correctness of the maxim, that unless the thermometer for the three months of June, July and August, averages 75, a crop of good sound corn cannot be relied on. The character of the grain crops, wheat, barley and oats, may now be said to be ascertained, and if not equal in every respect to what some have anticipated, they must still be pronounced abundant. Potatoes appear finely, the crop on the ground is large, and the ripe ones we have been using for a fortnight are of excellent quality. The turnep fly injured the ruta baga materially, but beets and carrots appear very well. We speak now of field culture particularly. The sugar beet has been considerably sown the present year, and promises well. We think this will be a favorite root, should experience show that it can be easily preserved for winter use. As to its value for animals, particularly milch cows, and for mutton, there cannot be a doubt.

Swine in a Fruit Orchard.

Mr. Phillips, in a letter published in the Memoirs of the Pennsylvania Agricultural Society, thus speaks of the beneficial results of allowing swine to run among fruit trees:

"For several years past my family have been supplied with the finest plums by a neighbor, who is the only person I know of who has had uniform success with them. Last year while his trees were in full bearing I carefully examined them, particularly as respected their culture and local situation, and I found that no uncommon pains had been taken with them, on the contrary they appeared neglected, as numerous dead and broken limbs hung about them, and that the very great success he had, could only be attributed to their situation, which was at the place where the hogs lay and were fed. He told me that the hogs never let a plum remain, that had fallen, many minutes undevoured, and thereby destroyed the insects that hung about, and the larvæ in them, and that of late very few insects had appeared about the trees."

We can bear testimony to the efficacy of swine in fruit orchards, in destroying the curculio, or the insect that so much injures the plum and the cherry. We have two cherry trees standing where pigs lie, and are fed, and though not as favorably situated as many others on our premises, in other respects, they uniformly produce the finest cherries grown on our trees. After the cherries begin to ripen there are few hours in a day in which the trees are not visited by the pigs, and every worm, stone, and cherry, are at once disposed of. On our other trees, the curculio does much mischief annually, on these the fruit is nearly exempt, and is decidedly larger and fairer than on those to which the swine have no access. In planting plum or cherry orchards, this fact should not be forgotten; and pigs should have the free range of such premises.

PATENT BUTCHERING.

James Carson, M. D. of Liverpool, has taken out a patent for what he calls a "New, quick, easy, and humane method of Slaughtering animals." The advantages of his method (of the mode of performing which his paper gives no description) as stated by himself are the following:

"An increase of the edible parts of a carcase to the amount of at least one-tenth beyond that which it would supply, by any mode of slaughtering hitherto in use.—The meat thus obtained is more juicy, tender, and far better flavored. It sets sooner, and of course is earlier fit for use. It keeps much longer sweet and untainted. In some experiments made on meat killed in my mode, and some slaughtered in the usual way, at the same time and kept in the same place and circumstances, mine continued sweet, while the other gave the most unequivocal signs of incipient putrefaction. It never shrinks, but on the contrary enlarges in cooking; the fat being supplied with the juices which enrich the muscular or red portion is much more savory and is more acceptable to delicate palates, and is therefore the less wasted. It requires less time to cook. The centre of a large joint is done nearly as soon as the surface.—These qualities are derived from the meat being less spongy, and a better conductor of heat, than meat obtained by any of the modes of slaughtering at present in use. It preserves well, and requires a much less quantity of salt."

If Mr. Carson has discovered a mode of slaughtering animals which will realize one-fourth of the advantages he claims, he has made a discovery of great value, and we shall hope to hear of the speedy introduction of the patent mode of butchering into the United States.

Advantages of Cooking Food for Animals.

Water in certain combinations with vegetable substances, may be considered as converted into a nutritious and sometimes solid food. Every one is aware that a given quantity of maize meal, or rice, or any farinaceous substance, will afford much more nutriment when boiled, than a much greater quantity in an uncooked state. Count Rumford states in his essays, that for each pound of Indian meal employed in making a pudding, we may expect three pounds nine ounces of the pudding; and he says again, that three pounds of Indian meal, three-fourths of a pound of molasses, and one ounce of salt, (in all three pounds thirteen ounces of solid material,) having been mixed with five pints of boiling water and boiled six hours, produced a pudding which weighed ten pounds and one ounce. The gain of weight in rice is more considerable than that of Indian or maize meal; but in either, it is so great as to demonstrate most conclusively the advantages of cooking, for experiments show that the gain in nutritive power of the cooked food is at least equal to the gain in weight.

That water is capable of conversion into a nutritive solid, is proved by the experiments of De Saussure in the formation of sugar from starch by the action of sulphuric acid. He says, 'that as starch boiled in sulphuric acid, and thereby changed into sugar, increases in weight without uniting with sulphuric acid or any gas, we must conclude that starch sugar is nothing else than a combination of starch with water in a solid state.'

It is perhaps owing to this addition of water in a solid form, that sugar is so much superior to starch as a nutritive substance. Some persons may doubt that water ever becomes a solid unless when frozen; but if they will take the trouble to weigh a few pounds or ounces of quick lime, and then slack it by water, and note its increase of weight, they will have their doubts dispelled. In cooking food, such as the grains, or potatoes, it is clear the water combines with the farinaceous matter in boiling, adding as decisively to its weight, as when united with the lime. Every farmer, or housewife, can, if they will take the trouble to weigh the ingredients used in making a pudding of Indian meal, satisfy themselves of this increase in weight; and by observing its effect as food, test the value of the cooked material over the uncooked or uncombined one.

MEADOW MOLE.

This is the name usually given to a destructive little animal that frequents meadows and newly ploughed fields, and at times does great injury to the growing grass or grain crops. Strictly speaking the animal is not a mole or a mouse, belonging to a different genus, but as a correspondent of this paper has well remarked, he is too well known to our farmers by the name of meadow mole, and the mischief he occasions, to render mistakes in the name of little consequence. The moles belong to the genus Sorex, or Shrew, and we have among us three varieties, the short tail shrew, which is the most common; the shrew mole, known by its strong fore paws and its curiously pointed nose; and the star nosed mole more rare perhaps than any of the others but still found occasionally. Beautiful figures of all these, and a new dimunitive species found during Major Long's expedition to the Rocky Mountains may be seen in Goodman's Natural History. The moles do comparatively little injury to vegetables, rarely if ever feeding on them, insects constituting their principal food; on the contrary the meadow mole (Avvicola of Linn.) feeds on the grasses or the bark of young trees almost altogether, and is at all times a pestilent depredator.

The meadow mole does the most injury in fields from which the stumps are not entirely eradicated, as the roots furnish convenient retreating and breeding places; in grain sown on lands turned over in the spring, beneath the turf of which the mole easily burrows and ranges at will; and in meadows where furrows or drains have been made to take off surplus or stagnant waters but which have never been covered or filled in. The banks of such open drains are the favorite resort of the meadow mole, from which it sallies out to feed on the grain or grass, and from which its paths may be traced to great distances. Fences, stone walls, all rubbish of every description, furnish hiding places to the mole, and are usually occupied by him. Lands thoroughly fallowed and made fine; or meadows smooth, and free from rubbish or drains, are rarely infested to any extent, except around the margins or by the fences; the animal being exposed to too many enemies to venture far from a hiding place. Meadows fed close, suffer much less than those not fed at all; as the after math or second growth of grass, furnishes an excellent covering to the pathways and enables the animal to traverse the field in all directions in safety.

The nest of the mole is made of fine dried grass; usually in some secure place; though during the summer they frequently build on the surface among the thick stalks of the grass or grain; and as they produce several litters in a year of six or eight at a time, they multiply to a frightful extent in those seasons, and places favorable for them. Last spring we observed hundreds of nests that had been formed under the heavy snow-drifts around the margin of a meadow, and as the drifts disappeared, their paths and nests exhibited the most singular appearances.

The injury they occasion to grass is comparatively little felt; but when they attack a field of wheat or barley, or a nursery of young trees, it becomes a serious matter. In the commencement, they feed on the young grain as on the grasses; but as the stalk of either grows harder, they cut it off at the root, and by repeated croppings bring it down to the point where the leaves or stem are juicy and succulent, or the ear is so far ripened as to furnish the berry for food. In this way they destroy much more than is absolutely required for food, and the ground of a wheat or barley field infested by them exhibits a sorry spectacle to the farmer. We had this year a field of spring wheat one part of which was ground ploughed and cultivated with corn last year, the other was a green sward well turned over and prepared for the seed. The difference in the ravages of the mole on the two parts was most striking; on the first part being scarcely observable, while on the last the ground was covered with the cut grain, and a very large portion of it was destroyed by them.

As to preventing their ravages we know of no way in which it can certainly and effectually be done. Owls, hawks, cats, weasels, &c. prey upon them, and during haying and harvesting multitudes are destroyed by the laborers employed, still they seem to increase.—In smooth fields, that furnish no lurking places, the creatures that prey upon them find no difficulty in securing every straggler, but where they have places of retreat as under turfs, drains, fences, &c. they bid defiance to their persecutors. The bird called in the southern states the carrion crow, a species of vulture, and which occasionally wanders to the north, early in the spring, are the most formidable enemies the meadow mole has to encounter, and a pair of them will do more to free a meadow or ploughed field of these pests than a dozen of cats or hawks. As these birds never disturb poultry, or do mischief in other respects, they should receive the same protection here, they do at the south, where their services as scavangers, are repaid by safety from attack by any one. It is probable the mole might be poisoned by mixing arsenic in food of which it was fond, and placing it in the places frequented by the animal, as the burrows, paths &c. but considerable care would be required to prevent domestic fowls, swine, and other animals from being poisoned also. From causes which we are unable to assign, they are much more abundant and troublesome some years than others, and during the present one they have proved peculiarly injurious to the farmer.

WATER CAUSING FIRE.

Ashes made of hard wood, when first made, and so long as they are kept dry, contain a metal called potassium; discovered by Davy, and which is the basis of potash. This metal the moment water touches it, decomposes the fluid by the absorption of its oxygen, and the combination produces a brilliant combustion; the result of which is potash, or in other words potash is an oxyde of potassium, just as the rust of iron is an oxyde of iron. Quick lime and water produce heat sufficient to set fire to wood, but there is no actual combustion of the substances themselves. In the case of the potassium the flame is brilliant, the instant it is touched by the water. It is supposed that this fact will account for many of those fires which have originated from ashes taken up and kept safe, until all fire, it was supposed, was extinguished, and which was probably the case, and which was then turned into some box or barrel, until they could be disposed of. Such perfectly dry ashes, free from fire, would, should they come in contact with a wet stave, board, or be even exposed to a current of moist air, would produce sufficient combustion to ignite wood, or coal, and might thus be the means of causing an extensive conflagration. That water produces flame, is here evident, but this is only one of the many wonders that the science of chemistry has in modern times revealed.

Spring Wheat.

It is surprising to witness the increase that has been made in the culture of this valuable grain within the last five years; it may be said, we think, without exaggeration, to have multiplied more than a hundred fold in that time. This increase has not arisen from the diminution of the quantity of winter wheat, but is rather an addition to it. The range of spring wheat may be said to be rather wider than that of winter wheat; or rather that it will succeed on colder lands, and consequently, as a summer grain, farther north than winter wheat. It cannot endure as great a degree of heat, as that sown in autumn, its roots not having that time to spread and penetrate the earth which is afforded the last; hence it does not succeed as far south as winter grain. Spring wheat does not yield on an average per acre, as much as winter wheat; it seldom exceeds twenty-five, or falls under fifteen bushels per acre. For flouring, spring wheat is not equal to winter wheat, the flour being less white and not as soft to the feel as that. It is however preferred by many for bread, as it does not dry as quickly, and has a peculiarly sweet and pleasant flavor which does not belong to the other. Some of the best of our western farmers are aware of this fact and are in the habit of sowing a few bushels, or acres, to furnish wheat for their bread. Formerly but very little wheat was grown in what is called the southern tier of counties; now beautiful crops of spring wheat are produced, and this amount will be increased annually, as the lands are brought under better cultivation, by ploughing and manuring. There may be years in which this crop will fail the farmer, but there is none of which the same remark will not hold good, and we think the culture of spring wheat may now be considered as permanently established among us.

Light Required.

Lord Brougham once significantly said that the 'schoolmaster was abroad,' or in other words that knowledge was increasing; but judging from what is almost daily occurring, there are many places where the labors of that worthy personage would be still valuable. There are a thousand prejudices to be eradicated that cling to us with all the force and authority of antiquity; a thousand new truths to be inculcated, a task the more difficult, as conflicting with preconceived opinions and belief. To root out errors is of small moment unless truths are supplied to occupy their places; or to change one error for another furnishes little proof that we are hastening towards philosophical perfection. Farmers have less excuse than most others for the retention of errors that belong to misconception of natural causes. Thrown by their own occupation into constant communion with nature, they should study to interpret it correctly, and avoid the errors into which less favored individuals are liable to fall. The belief in witches is exploded, yet there are a multitude of superstitious notions and ignorant practices still prevalent, not a whit less ridiculous, or unworthy the enlightened mind. It is common to hear farmers talk of the moon in conducting the common operations of agriculture, in planting and sowing, in the management of calves, lambs, and pigs, and this with a gravity which would do honor to a disciple of Bramah when explaining to his pupils the manner in which the earth is supported on the back of the great tortoise, according to the Hindoo belief.

A correspondent of one of our contemporaries relates the following, which we copy, as an illustration of the necessity existing for giving more information, and diffusing more light among the great mass of the people.

"A man with great self pride and confidence told how he could cure a horse of the bots. His horse was ill of the bots, and he took a teakettle of boiling water to pour down his throat. His father interrupted him so that he succeeded in poring down the horses throat only half the teakettle of boiling water. In truth the horse was immdiately dead—he opened him, and found just half the bots were scalded to death, when he exulted, by saying, that if his father had not interrupted him, he should have succeeded in destroying all the bots, and proved the usefulness of the discovery. We remarked to him, that it was an unprofitable mode to kill his horse to cure the bots. Oh, he said, he could easily have saved the horse by pouring down his throat an equal quantity of oil, to heal the injury of the scald, if he had not been interrupted."

This may be considered an extreme case of ignorant cruelty, yet the work published in London; on cruelty to animals, affords many instances of treatment no less

villianous, and some of which are unfortunately too common. To do away with these results so derogatory to man, we must remove the ignorance which is the cause. The mind must be enlightened, and taught to distinguish truth from falsehood, to trace effects to their causes, to reason correctly from known premises; in short to become rational, *thinking* beings, ONE of the highest distinctions of man.

THE GEOLOGICAL REPORTS.

Professor Mather has procured about 7,631 specimens of rocks and minerals from the counties already examined. He says,

"About one third of this number has been collected for the geologists of the different districts, and mineralogist, so as to give to each a suite to illustrate the geology of the first district, leaving about 5,088 specimens, which are deposited in the State cases in the Geological Rooms of the first geological district. These cases are in the room over the State Library. They are all labelled and arranged in eight distinct sets. One of these sets is displayed in the glass show cases, while the seven duplicate sets are contained in seven horizontal layers of drawers, and placed in the same relative order of position as those in the show cases above.

"The manuscript geological notes of my surveys in the form of a diary, are bound into *nine* duodecimo volumes of 400 to 700 pages each, each of which has a table of contents, and an alphabetical index to facilitate reference."

Dr. William Horton was also engaged during the past season in developing the mineral resources of Orange County, as one of the Assistant Geologists of the First District. It appears that he has collected and arranged in the cases of the State collection 2,888 specimens; and to his Report which is given in an appendix, we now turn our attention.

"Immense quantities of rock are found every where in the Highlands of Orange, which are neither perfect granite or gneiss, but partake of the character of both, or is intermediate between the two; and it is the *granatic* gneiss or *gneissoid* granite, which embraces a large number of the metalliferous deposits found in the county.

"A very striking feature in these Highland mountains, is the absence of long continuous ridges; of these there are *none*. They are all broken up into short abrupt hills, many of them 1000 and 1200 feet high.

"Another striking feature is, that the southern terminations of these ridges, are very generally abrupt, many of them perpendicular naked cliffs, having the appearance of being broken off, while the northern terminations are gradual, and slope gently to the surface and disappear."

The NATURAL BRIDGE in Virginia is remarkable for its height; and that across Lost River in Indiana remarkable for its breadth; but Orange County is not destitute of such a curiosity:

"A few rods from the southwest end of Popelo's pond where the stream enters it, [the limestone] forms a perfect *natural bridge*. It is used as such, and one might cross it without being aware, unless the noise of the brook aroused his attention. The *breadth* [?] of this bridge across the stream is fifty feet, and its length [?] up and down the stream seventy-five or eighty feet. Hornblende rock supports the arch on one side, the other is covered by soil, but it is believed to be granite. This space is spanned by the limerock. The water at present fills the concavity below so that I could not see through, but in times of drougth, people pass through it."

The importance of geological knowledge will be apparent from the following notice:

"A kind of carbonaceous matter coats the seams of the argillite, in a few localities. Tolerable specimens can be obtained at the quarry at the village of Sugar Loaf. In very many places in the county, this rock is loaded with carbon, so much so as to deceive the inexperienced eye into a belief that it is coal; hence the very common belief among us that coal in abundance will yet be found in the county. Mining for coal in a small way, has been undertaken in several places, and the rock has been penetrated, by boring for this purpose, more than 200 feet. These undertakings have all resulted in loss, and in a few cases to a ruinous extant. They tend however, to reveal the true character of the rock, and to show us how small a probability exists of discovering extensive beds of coal in this formation."

"MARL exists in almost and perhaps every town in the country, and every land-holder can soon ascertain whether he has it upon his land, without the cost of a dollar; for in this county it lies *naked*, or covered by water, or bog earth and peat. He has only to open a space a foot or two square with a spade, through the black earth, and if it exists, it will be found at the bottom. It has not been much used as a manure up to this period. The few trials made have generally been unfavorable, and from the very circumstance of all others which should have recommended its continuance. Marl where the trials have been made, was so cheap, and so easily got and put on the land, that [☞] too great a quantity was used, and all vegetation thereby destroyed, as effectually as if too much quick-lime had been used. *A field was pointed out to me by an intelligent farmer, where marl had been applied twenty nine years ago. The field is now in grass, and the boundaries over which marl was spread are still as visible as if a plough had been drawn around it.* Too much was used, and nothing would grow on it for many years, but *within the last few years, corn and wheat have grown and yielded bountifully;* but there is yet too much lime for grass, which is thin and sickly; nevertheless this trial, although a failure, proves how small a quantity answers without renewing."

In reference to the DROWNED LANDS, Dr. H. says,

"The drainage of this marsh has long been an object of great interest, not only to the proprietors, but to others in the vicinity. Many years ago, a large sum was expended for this purpose, in cutting down the bed of the river at the outlet, four miles west of Goshen. This trial partially reclaimed many acres at the shores. The proprietors are now employed in making a new channel for the stream, or at least for the surplus water, near two miles in length, and the water now flows in this new channel, gradually wearing it broader and deeper. By this channel it is proposed and expected to render available nearly 30 feet fall. This amount is deemed sufficient to lay the whole tract dry.

"If this effort to drain succeeds, and there appears no good reason to doubt it, 20,000 acres of the richest land will be reclaimed, and the surrounding country made healthy."

Dr. Horton relates a curious circumstance respecting Duck Creek pond in Monroe which discharges into the Ramapo:

"The waters of this pond are so near the level of Ringwood and Sterling valleys, that during the war of the revolution, when operations on the Ramapo were too near the British lines, a dam was erected across the north end, and its waters thrown to the southwest to supply the furnace and forges at Ringwood."

Under the head of BOULDERS, Dr. H. remarks that "wherever transported fragments of a rock are seen in the county, they are always to the southward of the parent rock. Thus, from the south end of Mount Eve a chain of blocks can be traced for miles, even into New-Jersey, of a character so peculiar as to render mistake impossible." A similar remark would apply to the boulders in Western New-York, and most extensive must have been that current which swept across the deep channels of our streams, and over the highest of our hills, without any material deflection from its general course.

So rich and so extensive are the IRON MINES in Orange county, that Dr. Horton remarks:

"The amount of iron to be made in the county in all time to come, can only be limited by the supply of coal necessary for the reduction of the ores."

A long list of the minerals of Orange county, occupying more than six pages, is given in the Report.

The appendix to the report on the first District, also contains that of Professor L. D. Gale on the Geology of New-York county.

"In some cases," says Prof. G. "the rock is so highly charged with pyrites, that on exposure for a few days in a dry season, it becomes covered with COPPERAS in the state of an efflorescent powder, exhibiting the appearance of white frost in an autumnal morning. This phenomenon I have repeatedly seen on the rocks at the Hell-Gate ferry."

In respect to DILUVIAL ACTION, Professor Gale says,

"[New-York] island contains in every part abundant evidence of a current having swept over it from northwest to southeast, both from the grooves and scratches still visible on the solid rocks of the island itself and its vicinity, and from the materials themselves being traceable to the original rocks, whence they have been transported. The southern part of the island contains the largest amount of these materials. In the southeastern extremity of it, usually denominated Corlear's Hook, the surface has been graded in some places 70 or even 80 feet below the natural level, and shafts have been sunk 75 or 80 feet more without reaching the rock.—The diluvium and alluvium together are therefore in this vicinity at least 150 feet."

"It is quite certain that an immense force has been in action at a former period, and has carried a vast amount of mineral material from their original beds, and spread them over a large area."

"The direction of the current is ascertained by that of the grooves and scratches left on the solid rocks; and its force by the size and quantity of the fragments, and the distance and elevations over which they have been transported.

"The term *grooves*, as here used, applies to all the furrows that are an inch or more across; the term *scratches* to all those less than an inch across; the word *furrow* without reference to size, but as a general term.

"Diluvial grooves and scratches have been found in every section of the island, from the banks of the Hudson on the west, to Harlem river on the east.

"The furrows generally are most distinct where the rock has been recently uncovered; and least so where it has long been exposed to the action of the elements. They have been found on the highest rocks, and at the lowest tide water marks, being a difference of more than 100 feet perpendicular height. It is evident therefore, that if these furrows were the result of a single diluvial action, or a single deluge, the current was more than 100 feet in depth. *The furrows are always most strongly marked on the northwestern slopes of the hills*, and least so on the southeastern. In many instances they are very distinct on the western and northwestern slopes, extending to the highest point of the rock, but *no traces are to be seen on the eastern and southeastern slopes*, although both slopes are equally exposed."

"The size of the furrows varies in the same and in different localities. Sometimes they are the finest scratches, not more than a line in diameter horizontally, and of the smallest appreciable depth. From this they increase to grooves four inches deep and eighteen inches horizontal diameter. In a few cases they are *furrows*, or rather *troughs*, more than two feet wide and six or eight inches deep."

Professor Gale assumes that the grooves and scratches were caused by the same diluvial current that deposited the boulders, the correctness of which position we are inclined to doubt. Between sixty and seventy observations were made in different parts of New-York island; in thirty-nine of these, the direction of the furrows was southeast; twelve were S. 25° E. and the residue chiefly between these lines; but the course of the boulders, wherever this was ascertained, was far more southerly. Thus, the boulders of anthophylite, found in large numbers in the 8th Avenue, are in a *S. S. W.* direction, says Prof. G. from the only locality whence they could have proceeded. Again, "the white limestone of Kingsbridge has been distributed along the eastern shore of the island in a direction almost *due south* of the only locality in the vicinity where it is found in place."

In regard to these appearances, Prof. G. remarks that "it is the united opinion of geologists that WATER was in some way the agent, but the circumstances attending it, the immediate cause or causes of its movement, and the precise epoch in which it took place, it would be difficult, if not impossible, in the present state of our knowledge to determine." It is without doubt a very difficult problem. If we assume that a current of water, sweeping along the rocks in its course, caused the furrows, we are met by the fact that the direction of this flood was not down the Hudson river, but diagonally across it from the Jersey shore. But if this difficulty could be obviated, there would remain another: rocks of vast weight are thrown upon, or mixed up with clay, sand and gravel, while the force necessary to remove a rock of 100 tons would sweep away these finer materials. Some indeed have conjectured that blocks of such magnitude have been transported on ice, and *not* swept along the bottom of the current. This hypothesis however would not explain the promiscuous mixture of rocks and silt, nor the diluvial grooves and scratches. On the banks of the Hudson, about six miles from New-York city, we learn from the Report that the furrows ascend from beneath the lowest tide water up an elevation of 70 feet in 300 or 400 feet distance, a fact not explicable on the principle of rocks floating on ice. But we may resume this subject in a future number.

T.

COMMUNICATIONS.

EDUCATION OF FARMERS—No. 7.
School Teachers.

Ma. Tucker—Furnishing the seventy thousand American schools with well qualified teachers, is perhaps, the most important and the most difficult subject connected with the intellectual and moral character, and of course with the liberties of our Republic. As long as talents, like every other article of commerce, will find the best market, men of high intellectual and moral attainments cannot be *retained* in schools at twenty-five dollars a month, while other professions offer four times the salary, with one half the labor and drudgery, and twice the respectability. No matter how many Teacher's Seminaries are established, or how richly endowed, and how great the number or the qualifications of teachers, they can never be retained in common schools, until they are *paid*, and until the profession of teaching stands as high in public estimation, as that of law, medicine, or divinity.

It must also be recollected on this subject, like every other, in a system of National Education, that more than three-fourths of the subjects of education are to be farmers and farmers' wives. Consequently, that system which is best fitted to promote the farming interests, is best fitted for the interest of our Republic. In view of that fact, no one can doubt, but a practical and scientific farmer may be better qualified to educate farmers, than the mere scholar, however highly accomplished. This opinion is entirely corroborated by facts, as many farmers, whom I have known to pursue teaching as a winter profession, for a course of years, have made far better teachers, than are ever found, in students of a college, or in medical, law, or divinity students, who use teaching as a kind of cats-paw profession, to aid them into another, which offers larger emolument and higher respectability. While our schools are furnished from the students mentioned, it is evident that they must suffer all the embarrassments, losses and other evils which cannot fail to arise from inexperienced laborers; and not inexperience merely, but those making no calculations, and taking no means, to acquire either experience or skill.

Let young farmers adopt teaching as their profession during the winter, for a course of years, and these two hitherto insurmountable obstacles, the want of salaries and experience, will, in a measure, at least, be removed. The farmer could not afford to teach in his own district at thirty dollars a month, for four months in a year, better than one, who depended entirely upon teaching for the support of a family, could for fifty dollars. As with the aid of a laborer whom he might hire for ten dollars a month, or perhaps by the assistance of his sons without hired labor, he might attend to all the winter business of his farm, in addition to his services in the school.

It is evident that a young farmer, who at sixteen or eighteen years of age, should commence shaping his course for the business of teaching as a profession, though it might be but for the winter, would act under very different motives, and consequently make greater and higher efforts, than a kind of interloper, who had escaped from another profession, just long enough and devoting just hours enough, to secure a *few dollars* to help him on to his more respectable calling. The former would be upon the alert to learn the best modes of teaching, to ascertain what were the best books, and to become truly intelligent and skilful in his adopted profession; while the latter would meet, they always do meet, any proposals for school improvements, with, "*I have not time to attend to them;*" as I must keep along with my class in college, or I wish to be admitted to the bar next court, or next year, or to a license for preaching or practising medicine.

To my mind it is evident, that a practical farmer, who has also the science and the experience for teaching, may be better qualified for educating farmers, than any person who makes teaching *exclusively* his profession. By connecting his pursuits of science and reading in winter, with his farming operations in summer, he would not only make education more practical, but farming more scientific, consequently both professions would be benefitted. His illustrations and experiments in geology, botany, entomology, chemistry, natural philosophy, geometry, &c., made for the benefit of his pupils in his school could be applied, during the succeeding summer, both by teacher and pupil upon the farm.

Experience fully proves that summer schools, which are composed principally of girls and small boys, are most prosperous, under the charge of ladies, as are schools of small children at any season. If a farmer should have charge of a school in his own district for a course of years during the winter, his sister, or as the case might be, his daughter, might have this same school during the summer, when he would still have a kind of double interest in its success.

It must be evident from these views, that the plan here proposed for supplying school teachers, would have at least these advantages over that now pursued, viz: it would be economical, it would make teaching a profession, and it would give schools the advantage of practice with theory. It must also confer upon children two advantages which would be lost, if teaching was *exclusively* a profession, viz: the advantage of experimental knowledge with theory, and to all young children, and to girls advanced in education, the advantage of ladies for their teachers.

In connection with the system here presented, 'CIRCUIT SCHOOLS,' to be held weekly or semi-monthly, and attended by teachers and lecturers, who were familiar with the sciences, and supplied with apparatus and specimens for illustrating them, would be highly important, especially in aiding young gentlemen and ladies, in *qualifying themselves* for teaching. Much might be said on the economy, and power, embraced in a system of itineracy, whether connected with religion or education, but the present occasion does not permit it. I can only add, that I am

Respectfully, and always yours, J. Holbrook.

Great yield of Milk.

Ma. Tucker:—Having noticed some statements of extraordinary cows in your paper. I have taken the liberty to send you the following for publication. I have a cow, although laboring under great disadvantage in consequence of short feed and extreme warm weather, gave the last week in July, the following quantity of milk:

	lbs.
Sunday,	49
Monday,	46¾
Tuesday,	46
Wednesday,	49
Thursday,	50
Friday,	48
Saturday,	47½
Total	336¼

The cream from the milk of the two last days was churned by itself and made 4¼ pounds of butter, being an average of two pounds six ounces per day, or sixteen pound ten ounces per week.

This cow last season, whilst in good feed, gave about sixty pounds or thirty quarts of milk per day.

Boughton Hill.

Victor, Ontario Co. Aug. 3, 1839.

Strawberries.

A writer in Hovey's Horticultural Magazine, gives a method adopted by a Mr. Darke, we believe, who cultivates the strawberry as an annual.

Towards August you will find that the main root of a strawberry vine has stretched out its runners, and occasionally put out a tuft of leaves and a few roots. He takes these tufts of leaves and roots, cuts them off from the parent stock, and sets them in good ground, covering or protecting them during the winter. The next summer they bear prosperously, when he again selects new tufts—sets them out as before—pulling up the old ones. In this way he proceeds annually, and never fails to have a good crop.

He reccommends Keene's seedlings and Downton's seedlings as the best varieties to be managed in this way.—*Maine Farmer.*

From the New England Farmer.

Farmers' Gardens.

To most farmers the idea of a good garden is synonymous with something quite beyond their reach—perhaps we "may as well out with it" and say something quite beneath their notice. They "like to see them," (though we have once heard a farmer or rather an apology for one, say he had rather see a hill of potatoes in a field than a garden of choice vegetables, fine fruits and gaudy flowers, which he had just been viewing: poor man—we pitied him;) but then they require so much labor, such small work too, fit only for women and children; they have no time for it; and then after all, they do not seem to amount to much. Such are the common remarks of farmers with regard to gardens, those emblems of the residence appointed to man in the state of his purity, and the types of what the productive parts of the earth may, probably will be, when man retraces the path which his sinning parents took, when "with wandering steps and slow," they took their last journey from the home which their Creator had fitted up for their permanent enjoyment. But to the remarks.—They like to see them, and we have in many instances seen their approbation manifested by a rude trampling upon and breaking down without leave or mercy, of many of the choisest products of a garden—plants which had required much labor in rearing and promised much pleasure in enjoyment. A horrid species of affection to be sure, but we had rather sometimes see this manifested in a small degree than to see an individual pass one of these beautiful repositories of nature and art, blended in sweet communion, with sheer indifference, for while man notices, even if his notice is marked by a shade of savage ferocity, there is hope that he may improve. But these remarks apply not to all. We allow there are many who do like to see them, and some who like to have them so near their dwellings as to see them at any time. "They require so much labor." Whatever renders life delightful, "all is the gift of industry." We are fully aware that a garden in order to show well—(this world is made up of shows, many of them useless indeed)—and to produce well, requires much labor, and so does any other object worth possessing. All however, who know anything of the comfort and luxury that a garden can be made to produce, will join me in the assertion, that in all the divisions of the farmer's labor, there is none which yields him a greater return than this; not in our inland towns a return estimated by dollars and cents it may be, but of substantial comforts and healthful luxuries, of objects to charm the eye and please the soul, as well as to satisfy the cravings of the mortal man. What noble achievements to be gained by one's own labor!

For man, proud, aspiring man, it may indeed be small business to labor in a garden, but it was not beneath his Maker to create one, and adorn it with all that was pleasant to the sight and good for food, nor is he now regardless of the smallest of all his works, however despicable they may appear in human eyes.

That the labors of a garden do not amount to much, is a supposition worthy only of those who have never enjoyed its benefits. But why do we see the attention (small compared with what it should be) paid to gardens, which is done in most of our villages? Simply because the quantity of land appropriated to such family is necessarily small, and they wish to make the most of it—or is it rather, the inhabitants of such places appreciate the luxuries that a garden affords more fully than the farmer? Something of both may be the case, and if both or either make it an object in town, it surely may be one in the country, at least so far as is necessary for family consumption, and if a want of time is an apology for the farmer, it surely might be with the merchant and mechanic, with their thousand customers at their heels. But the excuse is good no where. Every man has, or may have, if his time is properly apportioned, ample supply for the garden, inasmuch as it is a repository into which all the odd ends and loose change of time may be profitably thrown. The great difference is, that application to business is a part of the education of the mechanic or merchant, while too many farmers are brought up to indulge in many an idle half hour, which is often sadly spent in discussing the qualities of an enviable neighbor, or indulging in a favorite sport, which savors of cruelty. Solomon says, "there is a time for every purpose," and we have no doubt but it extends to making and tending gardens, for we have the assurance that he spake of all plants from the humble hyssop to the cedar of Lebanon, also that he dug pools of water, and planted orchards and vineyards.

We are established in the opinion, and our experience fully confirms it, that a garden is absolutely necessary to the completion of a farm establishment, and that where good farming does actually exist, many of the choice productions of the earth must be lost unless removed to the garden. Take for instance the strawberry. It is usually found in old worn out fields—very seldom in those highly cultivated. Is it economy for the

farmer to let his meadow or pasture depreciate in order to furnish him with fruit? Is it desirable that his family should be denied the healthful luxury it affords simply because it will not grow in his fields? We think not. The garden is its appropriate place and there it should be cultivated. We have tried it, and we find that including the amount of labor of cultivating with gathering in the garden, the cost is less than that of gathering in the fields, while in the former case we know where we are sure of a supply, and in the latter all is uncertainty, for on arriving at the field you may find that your neighbor's boys, who have no time to spend in the garden, have preceded you and robbed you of your spoil, though they actually had no business to do so. Here then you are saved the vexation of a disappointment, which is calculated to give you no very kind feelings toward your surrounders, and the excitability which the sight of your trampled meadow or famished pasture is calcualted to inspire.

Strawberries, which grow in gardens under the hand of culture, are larger and frequently of more delicious flavor than those grown in fields, and besides, the appearance of a strawberry bed is very pleasant, laid out in beautiful rows and decorated with its chaste white flowers, or its fragrant fruit giving a balmy softness to the air around. The same remark applies to the raspberry and bramble. They have no business in the corners of fence or along the walls and around old stumps, extracting from the richest soils their fertility, and where the same vexations attend their procurement as do that of strawberries. They should be aliens in the farmer's fields and citizens at home in his garden, where they should "enjoy all the rights and immunities" that cultivation offers. Their presence will beautify the garden—their absence ornament the meadow. But our native fruits and plants should not usurp this peaceful, quiet domain. The productions of other countries should be brought in to dispense their share of beauty to the beholder and comfort to the consumer. In short, the garden should be a sort of cabinet, where the valuable and curious productions of all climes should be arranged in order, according to their rank and in classes according to their diversity: and ye should talk of them to your children when ye walk among them, when ye sit down and when ye rise up. Let a portion of the garden be appropriated to each of your sons and daughters; this will excite in them a laudable ambition to excel in a good work—will furnish them an agreeable and healthful employment—will encourage them to be useful in raising the richest fruits and choisest flowers, will encourage a love of nature, and we verily believe at the same time, a hatred of vice; for vice appears to us an unnatural thing,—will kindle in their souls more ardent attachments to each other, will inspire a love of home, the place where the habits are to be formed and the principles are to be sown and take root and spring upward, which are to actuate them in after years, and then may be disseminated to all around them. When the home whence they originated may be far away, what kind associations will be awakened by the memory of their early days thus spent with their dearest and best friends? When the eye grows dim, what a halo of light will reflect upon it, when it looks back to these early scenes of virtuous employment.

Farmers, who of you will improve your premises and your families by improving your gardens? Some must begin, or by the mass it will never be completed. The world will never rise *en masse* for its own improvement. Whatever is done must be commenced by individual effort, and the example of individuals and their success will accomplish the object. But success does not always immediately crown our efforts. Perseverance is its harbinger, and in no pursuit is perseverance more necessary than in the culture of the earth, particularly the garden. Be not discouraged then, if in your first humble essayings you meet with failures, but go cheerfully on and in due time you will reap the reward of all your labors, "if ye faint not." W. B.

Mt. Osceola, July 16, 1839.

From the Maine Farmer.

The Newest and Greatest Humbug yet Announced.

Gigantic Clover.—A late number of the London Globe, contains the following account of a new species of clover, the seed of which has just been brought into that country from Asia:

"A gentleman has just arrived from Georgia, who has brought with him a new collossal and prolific clover seed from Buckhara, which he is going to submit to Mr. London. According to the accounts of the most celebrated travellers, who have visited that distant and important country, which is equal in climate to Great Britain, all grains, herbs and vegetables distinguish themselves by their gigantic growth. The clover seed just imported, grows to the enormous height of twelve or fifteen feet, and can be cut every month; but this is not the only valuable property of this most extraordinary production of the vegetable kingdom. Out of the stem a hemp is prepared, which is so highly esteemed in the distant region of which it is a native, that preference is given to it over all other sorts.

Should the plan succeed in England, and of which there can be but little doubt, it will form a new era, by rendering this country independent of foreign supplies of clover seed. It is fortunate that it has arrived in time to be tried this year. It must be sown in April. It is said that each grain will produce 300,000 seeds."

We advise the humbug dealers of this country, such as have originated the selling of "Chinese tree corn," *for charity*, and are selling multicaulis seed, &c. &c., to hasten by all means to possess themselves of some of these wonderful clover seeds; or, if that cannot be done, to *call* some other seeds by the same name, which will perhaps serve as well—especially if they should be carefully *baked*, or otherwise sufficiently heated, before being sold, to prevent the purchasers being disappointed in the *character* of the product. But whether baked or raw, they should of course be sold without any guaranty of the character or vitality—and for at least as high a price as *two-crop mammoth silk-worms eggs*—or otherwise we doubt much whether the greatest demand will be secured.—*Farmers' Register.*

From the American Farmer.

Spaying Heifers.

Gloucester County, Virginia, February 13th, 1821.

Mr. Skinner.—A friend of mine, observed to me a short time since, that you had requested information on the subject of spaying heifers, and though a subscriber to your useful publication, the American Farmer, I have overlooked it. I will however, give you some account of my experience. Ten or twelve years ago, I began with two in the spring, when they were two years old, and succeeding, I have not failed to spay from 2 to 3 each spring since, so that the whole number amounts to between twenty and thirty, and have lost two only by the operation. My most sanguine expectations have been exceeded in the superior excellence of the beef, which is peculiarly delicate. I have them slaughtered from five to six years of age, and believe they would be larger, and probably better a year or two older; they are thrifty and fatten with facility: the size is much increased by the operation, which is performed in the same manner that sows are treated for the same purpose, but I believe it might be improved (and I mean to try) by forming an inclined plane of soft earth, nearly to an angle of forty-five degress, against a post for securing the hind legs when the animal is laid on her back, with the heels up, and the head confined below; for the pain must be excessive when suspended by the hams sustaining its whole weight. I have no doubt but the bowels in that situation will be sufficiently out of the operator's way. Two years since, I caused two young cows with their first calves, a month old, to be spayed—they were about two years and nine months old, having, by accident had access to the bull, about the age of two years—my object was to ascertain whether they would continue to give milk as long as they ought to live, agreeable to report; They do continue to give milk, but not equal to what I expected—I am inclined to believe these cows were too young, their udders not sufficiently formed, and which had not grown with their growth—our milkers too, are black women who perform that business carelessly. In my long life, being more than seventy years old, I never knew but one free martin, (a barren heifer, that has been a twin with a bull calf) raised in our country—that with its male twin, a cow of mine produced, four years ago. They are well grown, handsome, and so much alike, they are not readily distinguished from each other; they have been recently subjected to the yoke—the martin has not a feminine appearance, and is at least, equal in strength and agility to its twin brother. I have no doubt it will perform well, as would also the spayed heifer, if required for some years, and then make the most valuable beef. The martin has had free access to the bull for nearly twelve months—he has never, to the knowledge of any one, noticed her, and her appearance would justify the belief, and also the report that they will not breed.

I am, respectfully your's,

Phillip Tabb.

From the Magazine of Horticulture.

On the Propagation and Cultivation of the Quince Tree.

The quince is a very beautiful tree when in flower, and, when the fruit is ripe in autumn, highly ornamental. It derives its name from *Cydon*, a town of Crete, famous for this fruit; whence its generic name Cydonia.

The trees are easily raised by layers, or by cuttings, taken from the tree in April. Select a shady place in order to plant them in rows, at about a foot apart from each other, and about four inches from plant to plant in the rows; spread over the surface of the ground rotton leaves, or manure, when the planting is finished, which will keep the ground from sudden drougth; also, water occasionally, if there should be a continuance of dry weather.

The year following, those that are well rooted may be planted out in May, and those that are not should remain another year. They may also be propagated by budding or grafting; and these trees will bear fruit sooner, and are generally thought to be more prolific, than those raised by any other method.

The best sort for planting is the *Portugal*, being highly prized for baking or stewing. It is of a fine purple color when dressed, and is much better for marmalade than any of the other varieties. The oblong or pear quince, and the apple quince, are also cultivated for family use; but the Portugal sort is in the greatest repute, either for cooking or preserving.

The quince tree may be pruned much in the same way as you would prune an apple tree, taking care to cut out all the old diseased and dead wood, and the cross branches in the middle of the tree, which injure each other by friction. Old trees are very apt to have rough bark; when this is the case, it should be shaved off with a draw knife, and the stems washed over with soap-suds and tobacco water. The trees will thrive in almost any kind of soil, but grow the best in a deep loamy soil, with rather a moist bottom.

The quince tree also makes excellent stocks, on which to graft pears, in order to obtain dwarf trees: for this purpose they may be propagated by cuttings put in as before recommended. The trees may be budded the second or third year, according to the growth they have made.

This fruit is but little cultivated, and, in consequence, always commands a high price in our market: it is as easily grown as any other fruit, and does well in situations where other kinds of fruit trees will not thrive.—A little more attention to their cultivation, and a very handsome profit could be realized from a limited piece of ground. Yours, J. W. Russell.

Mount Auburn, Cambridge, July, 1839.

From the New England Farmer.

Beet Sugar.

We perceive by a recent number, that our neighbor the publisher of the Yankee Farmer, proposes forming an association for the purpose of ascertaining the practicability and advantages, if any, of the manufacture of sugar from beets in this country, by the latest and most improved methods. Especially he is desirous of determining whether it can be so managed, as has been represented, that every farmer's family in the country may by a simple household practice, supply their own wants. We most heartily wish him all possible success. How far the calculation which he has given to the public in relation to this matter, are to be relied on, we are not able to say. But the funds asked for are a small affair compared with the importance of the object in view; and, divided as they will be, cannot fall heavily, even if the project should fail. But success is highly probable.

The sugar beet is beginning to be much cultivated in various parts of the State. We have seen considerable fields of it in many places; and trials of it as feed for cattle and swine, have served to bring it into favor. A company is prosecuting the cultivation of it, as we have been informed, to a large extent in Michigan, with a view to the manufacture of sugar. One spirited individual has informed us that he has one hundred acres in that State devoted to sugar beet. The present year therefore, will probably decide what can be done.

There are facts in regard to it now existing in France, which we find it difficult to reconcile to statements which are constantly made in respect to the manufacture in that country. The first is, why if the cultivation and manufacture are as profitable in that country as is represented, they require so heavy a duty upon colonial sugar in order to protect the manufacture of beet sugar. The second is why, if the new methods recently discovered are successful, and by them the sugar can be produced at a low rate, they are not at once adopted, and the government protection rendered unnecessary. An intelligent gentleman, sent out by the Northampton Beet Sugar Company, for the express purpose of obtaining all necessary information in relation to the matter, informed us that Shutzenbach's method upon trial in France was not approved. Pleischman in his interesting report to Congress on this subject, states the discovery of a method of extracting the sugar from the beet, by which a considerably larger amount of sugar was obtained than by Shutzenbach's method, at a less expense, and in a way which would place the manufacture within the reach of every farmer's family in the country. It is now full time that we should have received the results of experiments made by this method. Probably they have been made and others are in possession of the results. We have not been so fortu-

mate. Shutzenbach's method, as we have been informed by persons who were not proprietors in the concern, has been tried at Northampton with success. We have seen a sample of the sugar made there, which promises well; but can give no particulars. More than a year since we mentioned the discovery of a method of extracting and manufacturing the sugar by a gentleman at Stoneham, in the vicinity of Boston, which promised the advantages of general practicableness, small expense and a large per centage of sugar from the amount of product. We saw the sliced and dried beets; the mode of obtaining the syrup; the chrystallization of the syrup, and the sugar perfected, but not refined—certainly a beautiful article. For the amount which could be obtained from the beet by this process, and which was represented to be from eight to ten per cent., and for the expense required in the extraction and manufacture, we relied upon the testimony of the operator, whose integrity is beyond a question. We deemed it a most important discovery, and after a patent for the manufacture had been obtained, we had great pleasure in announcing it. We thought the vessel had not only entered the harbor but actually reached the wharf; and were quite disposed to throw up our hat with the farmers and give three cheers. But it seems to have been a phantom ship or a sort of "flying Dutchman," for we have not been able to obtain a word further on the subject.

The matter deserves all the attention which any among us seem disposed to give to it; and we wish our neighbor all the beet sugar he can need in his tea and coffee the rest of his life, sweet creature as he must become, if his useful project should prove successful.

H. C.

From the London Farmer's Magazine, for July, 1839.

On the Rearing and Feeding of Cattle.

In our island, where the domestic animals enter so largely into the article of human food, a great part of the farmer's attention must be devoted to the rearing of them to the degree of perfection their ultimate use requires; for every labor bestowed on any kind of cultivation and every article the farmer produces by the application of that labor tends to the same result—the production of food for man and beast. Before the introduction of green crops, a very imperfect system of rearing prevailed, from want of succulent food for winter; grass-fed animals could only be brought to market, and if kept through winter they lost during that time the degree of condition they had acquired during summer, for hay and straw if used in profusion will not rear or feed the animals quickly and profitably. The cultivation of green crops has completely altered the whole system, and has introduced an entire revolution, both in the cultivation of the land, and in the management of the domestic animals, a better and more regular supply of food has been obtained, and a vast addition to the number and quality of every article produced on the farm. An improvement in the supply of food carried along with it corresponding improvements in the animals themselves, and on no point of rural economy has more skill and exertion been shown, or more persevering industry exercised, than we have witnessed by many breeders in this kingdom, in improving the qualities of the animals, by intermixing and engrafting the properties of the one on the other, so as to develope and bring forth those qualities for the use of man. Our breeds of cattle are numerous, but the various crosses and remnants of old breeds need not be enumerated, and they may be reduced to the few breeds that are now most approved, and from which we may choose for any situation in the kingdom. For all rich soils and favored situations, the Durham breed, or short-horns are preferred, and the long-horns are still kept by many excellent cultivators. The Herefords and short-horns seem nearly balanced in merits, if we may judge from the prizes awarded them. For inferior lands we have the Devon breed, not surpassed by any cattle in the kingdom, and besides we have multitudes of nondescript animals, that do not fall under any class, but which are yet much used in all parts of the kingdom. In Scotland, where great numbers of cattle are reared and exported, the native breeds are three—the Ayrshire, which are evidently allied to the Yorkshire breed—the Galloways, or polled blacks, and the West Highland breed of horned black, shaggy haired animals, which are found, with some little variation, all over the Western and Northern Highlands of Scotland. Great numbers of these animals are fed in England; and an opinion is entertained, and my own experience goes far in support of it, that these mountain cattle pay more money per head and per acre, than any of our fine breeds, after all the improvements that have been made. The cost of production is small, and the beef commands a higher price in the market. In bringing cattle forward to the state when they are disposed of to the consumer, farmers have adopted two methods; some prefer to breed and feed on the farm, a number that the farm can support, and others to buy yearly a number they can afford to feed. The preference given to either of the two methods would seem to be, or should be, determined by locality and other circumstances, yet caprice and fancy would seem to do much, for it is hard to conceive how two farms adjoining each other should be suitable to different modes, except in the bare opinion of the farmer, or how two breeds of animals can be most profitable in similar cases, except in opinion only. In many situations the difference to be observed between breeding and feeding, is most marked, and it is very fortunate that the diversity of opinion prevails in other places, for it affords a ready market for our mountain breeds, which if the case was otherwise, might not be so profitable. In choosing a native breed, the farmer will be guided by the quality of the soil, the food he can produce, and by other circumstances, and much will depend on his own fancy; but if he prefer to buy in rather than breed, it will be found that the Scotch polled and West Highland breed will pay more money than any other. A very general mistake is committed in not allowing them sufficient time on the land, in order to feed—not less than eighteen months should be allowed, or twelve in cases where they have been bought in good condition. Green crops being now known to us, which if duly cultivated will afford succulent food during winter, it is understood that no farmer neglects providing a sufficient quantity if he wishes to rear and feed profitably, not only with regard to the profits of the animal itself, but to the manure raised for the future benefit of the farm. But notwithstanding the long acknowledged profits of these crops, and also of improved breeds of stock, we find great neglect prevail on both points; for if we look into Smithfield, or any other market, we find the improved animals bear a small proportion to the others; farmers yet persist in breeding very unthrifty animals, and for want of green crops they are bred and starved upon a system. In many cases, however, we find both breeding and feeding carried on systematically and profitably, with due attention to the profits expected from the animal itself, from the attention and food bestowed, and also to the future benefits expected from the system.

Cow-sheds should be provided with calf-pens adjoining, under the same roof, where the calves are confined in separate apartments for one animal, and floored with boards, pierced with auger holes that they may lay dry and comfortable. From these apartments they are brought twice or thice a day to be suckled, led by a halter, and tied, when sucking, to a rope extended along the cow-shed. Sucking is always to be preferred to nursing by the pail; when milk is exposed, much of the value is lost, the gaseous fluids go off by evaporation, and the appearance of the calves nursed by the two methods is a sufficient decision. Suckling is attended with less trouble and an experienced cowman will soon be able to judge of the proper quantity to be allowed them. From January to June is the proper time for weaning—early calves maintaining a decided superiority, unless greater encouragement be afterwards afforded to the later ones. In situations where fattening for veal is found profitable, both weaning and fattening go on together; and even where cheese and butter are manufactured, all the three may be easily managed, by allotting a number of cows for suckling and a number to be milked for the dairy. Calves fed for veal must not be restricted in the quantity of milk; for weaning, they must be allowed such a quantity as will keep them always in a sleek and thriving condition, without feeding them, for any fat produced at that time would be lost. An ordinary cow will feed four calves for veal, or make veal of two and wean three, much depending on the milky nature of the cow, and on the quality of the pasture. The various substitutes for milk that have been puffed abroad among farmers have all proved an utter fallacy, only supplying the farmer with a few pounds of butter and cheese at the expence of the animal. They never fail in producing a large belly and offal, an infallible mark of degeneracy and bad keep, in any animal, and in no case have we been yet able to improve upon what nature has provided the mother with in nursing her offspring. During that time the mother should form the chief object of our attention.

In the month of May, when the weather has become warm, and the young grass has sprung, the earliest calves will be turned out into a grass paddock of fine pasture, provided with water and shelter, and convenient to the homestead, and where they can be suckled twice a day. The cow's pasture should be adjacent if possible, and also well provided with water and shelter, and laid down or improved for the purpose. The paddock for the calves may consist of one or two acres, and an orchard suits very well, the fruit trees affording shelter from the heat, and amusement in rubbing. A shelter shed is indispensible, with a dry well littered bottom, and may be so contrived, as to suit for lambing the ewes in the spring, which business will be concluded before the calves are turned out. The ewes lying all night in the paddock, will bestow a good top dressing, which must be attended to by rolling. At the age of 16 weeks the calves will be ready to go to the pasture field, the quantity of milk having been gradually reduced as the calves learned to eat the grass. As they are removed from the padlock the next oldest ones are turned out from the calf-pens, and when the weaning season is near a close, as many of the latest calves as the paddock can maintain may remain in it for the season, to be near at hand for receiving some better encouragement to raise them to an equality with the oldest. Nothing more disfigures a herd of cattle as to see them of different sizes and qualities, and colours, and in many cases of different breeds, showing a great want of skill in the breeding and of care and attention in the nursing and rearing.—After the weaning season is over, the milk for the remainder of the season may be applied to suckling for veal, or to making butter and cheese, as situation may direct. In places where these articles are the staple produce, the weaning of calves will be on a smaller scale; but on these farms some are weaned, to which the above observations will equally apply.

When the calves are removed from the home paddock, the best pasture on the farm will be given them, well watered and sheltered if possible; in many cases the lattermath of a hay crop answers well. When fields lie in permanent grass, a shed with a view to permanency may be erected in each field at a very trifling cost, and may be so contrived as to suit both cattle and sheep. Where the alternate system of farming prevails, a corner where the plough does not strike, may be got, and a very useful shelter erected. Cattle of an age should pasture together, and the smaller the lots the better.

By the end of October, the approach of cold weather will render necessary the removal of the cattle to the home yard. Every farm is, or ought to be, provided with a number of yards suited to its size and to the quality of the soil, the bottoms level with that of the shelter-shed raised above that of the yard, to throw the moisture outwards, that the cattle may lie dry; cribs for holding the roots given to the cattle are ranged along the sub-division walls, and sometimes placed in the shelter-shed under cover; the most approved are of a square shape with a latticed bottom, which allows all moisture to escape. Buildings of stone and lime have been erected along the walls, but they hold water and sludge very much; wood is cleaner, and where used, the bottom planks should be perforated with holes to discharge the water. Troughs of stone, of wood, or of cast iron, are placed across the division walls, so as to supply two yards; and the water is conveyed in pipes from a pump, or supplied by ball cocks and pipes from a cistern placed aloft for that purpose, in some house of the farmery, and to which the water is raised by a forcing valve in the yard pump. Turneps are now mostly given in a cut state, and where straw is rank and abundant, it may be cut to shorter lengths, which will render it more manageable and easier of reduction.

Into these yards properly furnished, the cattle are put in lots of ages and sizes, varying in number from 3 to 7 when feeding; young cattle may be kept in greater numbers. Most feeders now prefer the open yard to housing, though on turnep farms, a feeding house is very necessary where a few choice animals may be fattened, or a few inferior ones may be brought more quickly to perfection. Fresh straw should be put frequently into the racks, and cabbages are a very proper article to begin the feeding of young stock for the first winter.—These and turnep tops are given once and better if twice a day, and continued through the winter—if they fail, potatoes and beet are given in moderate quantities, so as to keep the young animals in a sleek and thriving condition, without any tendency to gorge them, or induce them to nauseate their food. They should always show a keen appetite and seem able to eat more than is given. The yards are frequently littered, thinly at a time, so as to keep them dry and comfortable, and also mix the manure properly. The straw racks are shifted often that the straw may not lie dry around them, and the yards are of such a size as will admit of the cattle treading, dunging, and watering on every part. A very common error prevails on this point, the yards are much too large, the straw lies dry and unmixed in many parts, and the good dung lies huddled together in the other places. Space sufficient for the cattle to move about freely for air and exercise is quite enough, due regard being had to warmth in the shelter shed. An equal mistake with too much space lies in making the yards too small.

In the month of May of each year the pasture fields will be ready for stocking, when the different sizes and ages will be arranged by the best judgment of the farmer. In October of each year, the cattle will be turned into the fold-yards and fed with ample allowances of roots and straw, and with the yards kept dry and comfortable. As the cattle increase in age, the fewer numbers must be put together in one yard, and during the third and fourth winter they will be fed off and sold. I have recommended all calves to suck the cow for veal or for weaning, and I now mention that the treatment of any animal during the first year of its growth generally stamps its future distinction. If it be stinted in the quantity or in the quality of the food, future pam-

pering will not recover its lost growth, and if it be well fed during the first year, and attain a good size, indifferent treatment afterwards will have much less effect. If a calf be well suckled, great attention is necessary during the first winter that it receive such treatment as will carry it forward, and that it does not lose in that time what it gained the previous summer. This result often happens from want of winter food of roots, for though hay and straw be in profusion, they never can supply the place of green crops.

Cattle when feeding must have a full supply of food, but not to pall their appetites, which must always be keen and in full action. The food previously given them should be clean eaten up or nearly so before any more be supplied, and the cribs regularly cleaned out and every filth removed. The first feed of cut turneps, potatoes, or beet is given by the break of day, and the last so long before darkness sets in as will allow time for the cattle to eat the whole during daylight, as any accidents from hoving or choking have a better chance of being seen and remedied. A dry bed in the shelter shed and in any part of the yard during dry weather is indispensible.

Opinions differ as to the most profitable age of feeding our best breeds of cattle. My own experience agrees with the opinion expressed by Earl Spencer, one of our highest authorities, that the age of four years seems the most advantageous, as the most likely to secure the utmost weight of the animal, and to avoid unnecessary expenditure in trying to obtain more bulk, and also the loss by slaughtering at too early an age, before the animal had reached maturity. I have observed that a great part of our cattle are starved on system—they are grazed and gain something in summer and lose it in winter. The miserable appearance of young stock both in the yard and in the fields sufficiently support this opinion, and the case will not be mended till green crops are more extensively cultivated. We know plants adapted I may say to almost every soil, and it only remains to cultivate them. In order to produce a thoroughly well fed and ripe animal it must be gradually fed from the day of its birth, by good keeping which will keep the body in a thriving condition and full of juices, and also produce that mixture of fat and lean so necessary to constitute beef of good quality. Hence arises the well furnished animal in the hands of the butcher, and from the starving system is owing the bad quality of much of our animal food, for unless the animal be well fattened and regularly, the lean is dry and wholly wanting in juices which can only be imparted by a ripe state. The one-half at least of our cattle in market are not fat, they are starved in early years, and then for a short time they are tied to a stake and gorged with food to produce an appearance quickly, and sold off to save expense, and hence arises the badly furnished animal in the hands of the butcher. An animal always in good condition is fattening gradually and profitably, the dung is of more value, and when the age of fattening off arrives, a small application of more food concludes the process. A greater number of cattle is often kept on a farm than it can maintain profitably—an erroneous policy but very common.

I have observed that where a farmer chooses partly or wholly to follow the buying system in place of breeding, it will be found that our small mountain breeds will pay more money than any other. In most cases too short a time is allowed them to feed, for the natural propensity to fatten has not been in them any way improved by breeding or keeping, and in that respect they differ from our new breeds. They are mostly fed very poorly in their youth, and when transported to rich pastures, fat cannot be laid instantly, but in course of time, if in fair condition, a year will be sufficient, but if bought in a lean state from droves, they should be on the ground for 18 months, fed the first winter on half the full allowance of green food, well grazed the following summer, and fed off the ensuing winter. This is gradual feeding and indispensible if we wish for good beef. The age should be four or rather five years when slaughtered.

Oil cake, bean, and barley meal, oats, and other articles have been used in the feeding of cattle, but experience has long since proved that if the farmer will only try to raise potatoes, beet, cabbages, and turneps in quantity, he need no substitute, except in case of a failure of the above crops. Straw alone is required for litter, and for the cattle to eat a little when inclined.

J. D.

Crimson Clover.

The following notice of the *Trifolium Incarnatum* is taken from the Code of Agriculture, and as this grass is getting into favor, it will not be unacceptable to see it so highly spoken of abroad:

"It is a subject of astonishment that this valuable plant, (*Trifolium incarnatum*) should not have been long ago introduced into this country, and cultivated on an extensive scale. If sown in autumn, after a crop of potatoes or other roots, it produces next spring a crop fit to be cut for soiling cattle, eight days earlier than lucerne, and a fortnight before red clover. Care, however, must be taken to have good seed, and not to sow it too deep. It produces two excellent crops in one year, the first of which should be cut as soon as it comes into flower, and the second will produce a considerable quantity of seed. From its early growth in spring, when other articles for feeding stock with advantage are so difficult to be obtained, it is likely to become a valuable acquisition to British husbandry." If the clover—the seed of which is, we believe, to be had in considerable quantity of the seed merchants in this country—be sown in spring, it is considered that it will produce a full crop in Scotland in the months of July or August, and must be of great value to those on whose lands the common red clover does not succeed, or where the crop may have partially failed. It is proper to remark that this is an annual plant, and therefore should only be employed in partial husbandry.—*Baltimore Farmer.*

Change of Food.

There seems to be a natural disposition in man, in the brute, and in the vegetable, to a change or alteration of food, alike conducive to the gratification of the appetite and the promotion of health.

This propensity in man is apparent to all. That a change is conducive to health, is evidenced by the fact that persons long confined to the same diet are more liable to disease than those who indulge in a variety. This is seen in long voyages and in the army, where men subsist daily upon the same rations. If there is any exception to the rule, it is where the food is of the simplest kind, as the brose of the Scotch, the potatoes of the Irish, or the rice of the people of the tropics.

The general principle being admitted, or that even a change is not prejudicial to health, how important is it to our comfort, and economical in regard to expense, to multiply around us the fruits, vegetables, &c., which are the subjects of garden and field culture, and to select for this purpose the best varieties; and these are undergoing constant increase and improvement by means of culture and fecundation. Every season brings to our notice new species and new varieties, particularly in garden productions, favorable alike to health and to innocent gratification. The tomato and the rhubarb, both of recent introduction to our gardens, are of this character.

"By means of new varieties," says Bishop, "the produce of our gardens and fields are not only increased in a ten fold degree, but the quality of the produce is increased in a still greater proportion, and the difference between varieties that have sprung from the same species, fit them for different purposes, different soils, situations and climates. Thus in edible plants and fruits, we are supplied with an agreeable change throughout the year, from a difference in varieties that have sprung from the same species. Nothing is more obvious upon comparing original species with their varieties produced by culture, than that we, by means of the latter, enjoy a vegetable food far preferable to that of our forefathers; and as it is probably beyond the power of man, of cultivation or of time, to determine the degree of excellence attainable by varieties over the species whence they have sprung, and as that degree is unknown, we are justified in regarding it as progressive, and to consider the production of a good variety as the sign or harbinger of a better."

The disposition of animals to change their food, is evidenced by their habits and their disposition to pluck a variety of herbage, and to select that which is new to them. That a change is conducive, and indeed indispensable to health, has been proved by repeated experiments. Dogs and other animals, who have been confined to one kind of food, although of a kind naturally suited to their wants, have sickened and died. Sinclair cites a case of the effects of two adjoining pastures—one containing only white clover, and a patch of orchard grass—and the other stocked with five or six kinds of grass, and among them the orchard grass. In the first, the sheep resorted for a change, to the orchard grass, which they ate to the stump, culms and all; and some time after this was exhausted, many of the sheep became affected with the red water, and some of them died. In the adjoining pasture, in which there were six or eight species of grass, the sheep were wholly exempt from disease. But Sinclair demonstrated by accurate experiment, that a multiplicity of grasses sown together, not only contribute to the health and thrift of the animals depastured upon it, but that the product was greater, considerably, and exceeded that of the best pasture grounds. From these facts Sinclair and others argue, that we ought, in stocking down our grounds, to avail ourselves of all the grasses that we can procure, and that our soil will nourish. Groom observes, that out of more than 200 grasses suitable to England, only one genus, the rye grass, has as yet received general culture; and that of 60 species of clover, only three or four have received attention. The presumption is, that many indigenous grasses which have hitherto escaped the notice of our farmers, would be improved by culture to as great an extent as the wild carrot, parsnep, cabbage, potatoe, apple, plum, peach, &c.

That the vegetable is improved by a change of food, is not only evidenced by the natural law of alternation, witnessed in forests and in cultivated grounds, but by the improvement which takes place from a change of seed. It has become a well established principle that a change of seeds from one soil and from one district to another, is highly advantageous. We have had this particularly verified in the potatoe, where foreign seed, of like variety and size as that raised on our farm, produced in the same field one-third the largest crop. Growing from the same seed, without change, seems to be a sort of vegetable breeding in-and-in. The progeny seems to deteriorate in both cases, and ultimately to become worthless. Upon these principles we should not only recommend an alternation of crops, but a frequent change of seed, to ensure a healthy vegetable constitution and vigorous growth.—*Albany Cultivator.*

Mix Straw with Clover.

Farmers who have straw or coarse old hay, will find a great advantage in mixing them in layers, with hay that is not thoroughly made; the dry stuff will prevent the clover from injuring by moisture, and it imbibes sweetness so that cattle will eat it with a good relish.—*Yankee Farmer.*

Accumulation of Manure.

Manure is the true source of the cultivator's wealth. Every farmer should tax his wits to the utmost with a view to the accumulation of this article. He can never have too much of it, and must fail for the want of a competent supply. The barn of course, will yield its heaps in due proportion to the stock of cattle and horses kept. Sheep, too, yarded in winter, will make considerable, and this of an excellent quality. But the hog yard is the place to make it in any desirable quantities. It is worth one's while to keep a lot of swine, if for no other purpose than as manufacturers of manure. The yard should be on a stiff subsoil, dishing in the centre. If it is floored with stone or plank, and has a cover over it, so much the better, as then neither the salts will go downward, nor the gasses upward. The whole strength will be retained. Put into this through the whole vernal season, every thing of a waste vegetable description that you can rake and scrape together. As fast, too, as the family makes soap suds and dish water, in with every quart of it. Let none of it go elsewhere. It is an excellent plan to consult the road side for rich soil and low places for boggy substances, which have been washed down from elevated grounds. Cart this home as so much gained and let your hogs saturate it with urine. Every load of it will come out next spring so much excellent manure. Go out too, half a dozen times in the course of the summer, with a stout scythe, and mow down all thistles before they have blossomed or gone to seed, cut up brakes at a great rate and all unnecessary bushes. Then take your hay cart and load up. Bring the collection home and pile it up outside the yard. Every little while throw a lot of this over the swine. If you occasionally scatter a little corn or oats with the mass, it will do the hogs no harm to root after it, and will do the collection good by producing fermentation. A great many loads of the most valuable manure may be made every year by some care and attention of this sort.

Barn yards, also, should be constructed on principles similar to those which we have mentioned for the manufacture of manure by swine. These must, suppose, be in the open air, whereby much of the gasses will escape; still the deposit of much in those yards, made lowest in the centre, will soon become saturated and prove an excellent stimulant to the soil and food for plants.—*Maine Cultivator.*

The Wheat Fly,

Is an animal, that has never attacked my grain. It has so happened that my neighbor's wheat and mine were in adjoining fields, separated only by a fence; that his wheat was nearly destroyed by the fly, and not one in mine. The only *solution* I can give to it, is as follows:

My wheat *uniformly* is sowed late—never until there has been a hard frost, sufficiently so to kill insects of that kind. I cause a strong solution of salt and water to be made—strong enough to bear an egg, and my wheat is soaked about 24 hours in it, and then rolled in lime on the barn floor. When that rule has been followed, my crops have been about as good as my neighbors when their wheat was not afflicted with the Fly. Care should be taken not to soak the wheat more than about 24 hours, and then it should be rolled in lime, else the germinating quality of the wheat may be destroyed or injured.

A. Dey.

New York, 23d July, 1839. [*Poughkeepsie Tel.*]

From the New England Farmer.

Butter.

There is no article in our market or on our farms, in respect to which there is more just ground of complaint than butter. In few cases is it found fresh and sweet. In most cases, we speak particularly of public houses, it is absolutely detestable; and often comes upon the table "daubed over" in a manner thoroughly disgusting. How we are to find a remedy for this evil it is not easy to see. It is difficult to induce a patient to take medicine, who has not the slightest consciousness of ill health, or submit to an amputation, when they have never felt any pain in the limb; or to speak more plainly, to induce those persons to wash their faces who never look in a glass, or who perhaps in the course of their lives never yet saw the true color of their skin. We are determined, however, as often as convenient, to throw in our mite, and protest against the manner in which this article, which is almost a first necessary of life, is made, kept, and served up.

We might have good butter if we would; but with our usual modes of management, it is not surprising that things are as they are. The milk is not always drawn clean; and impurities find their way into the pail which no strainer will take out. The pans into which the milk is poured are not always thoroughly cleansed and scalded, and dried before using. The dairy room is oftentimes ill-placed and badly ventilated; and frequently made a general receptacle for broken meats and dirty dishes, and the nameless and miscellaneous fragments of the table. Then, too, the cream is kept too long before churning; the butter is imperfectly worked; the article is oversalted; and put to be kept in a place where there is little or no difficulty in soon passing into a state of rancidness.

The farmers have no excuse whatever to offer for poor butter. They might have good butter always. There is encouragement enough given in our markets. The butter of some farmers who send weekly to Boston commands always thirty-seven and a half cents per pound; and if they could send a thousand pounds a week they would find a ready market for the whole of it. The butter sent in for exhibition and premium brings usually from thirty-three to fifty cents per pound. One farmer within our knowledge, has for years received forty-five cents per pound for his butter through the whole winter season. Can farmers ask any better prices than these? and why should any farmer consent to be outdone by his neighbor, if he has the spirit of a man? Perhaps however, this matter belongs more justly to the "appropriate sphere" of women. We shall say nothing uncivil to *them* most certainly; but we hope at least they will hear what we have said to their husbands.

We occasionally hear housekeepers remark that they buy a cheap butter, because it "will answer well enough for cooking." We always mark these people; and desire to keep clear of their cookery. Nothing should answer for cooking which is not entirely sweet and wholesome; and rancid butter is poison, let it be disguised as it may be. Poor butter in the market ought never to find a sale; and in spite of all the noisy discussion now ringing in the public ear about sumptuary laws, we do maintain, without compromise or abatement, that the use of spoiled butter for food, ought to be made an indictable offence.

H. C.

Morus Multicaulis Tree Agency.

THE subscriber now offers for sale some choice lots of the above Trees, warranted of the genuine kind. Also, some Brussa and Canton, now growing in different counties of this state, to be delivered in the fall, or on the ground as they now stand, viz:

In Cuyahoga county,	1 lot of		5,000
Do	do	1 "	6,000
Do	do	1 "	4,000
Do	do	1 "	1,000
Do	do	1 "	2,500
Do	do	1 "	800
In Portage county	1 "		20,000
Do	do	1 "	8,000
Do	do	1 "	6,000
In Stark county	1 "		4,000
Do	do	1 "	6,000

In Cuyahoga and Portage counties:

1 lot of Brussa	3,000	1 lot of Canton	3,000
1 "	2,000	1 "	6,000

Which will be sold in any quantity to suit purchasers, at fair prices, with others, the particulars of which are not yet received, by

JAMES HOUGHTON, Agent,
Cleveland City Seed Store.

☞ Persons who are desirous of disposing of their trees through my agency, are requested to forward particulars as early as possible, and the business will be transacted on liberal terms, and agencies are solicited. Cleveland, Ohio, Aug. 17-w3m-m1t

The Southern Cultivator,

Pulbished every alternate week, at Columbia, Maury county, Tennessee.

DEVOTED to Agriculture, Horticulture, Stock Farming, and General Improvement. From its location—in one of the wealthiest districts in the South West—and its already extensive and rapidly increasing circulation in Tennessee, Alabama, Mississippi, Kentucky, Arkansas, &c., offers superior inducements for Advertisements of every description. Aug. 3, 1839.

Morus Multicaulis.

A FINE Lot for sale; also, a few English Hawthorn of large size, a very desirable lot, by S. MOULSON,
February 27, 1839. Front street.

LOCKLING'S PLOUGH.

WHEREAS Nathan Lockling has appointed Joseph Lee, of the City of Rochester, his general Agent for the sale of Rights to Manufacture his Plough. All communications addressed as above will be promptly attended to.

The above Plough has been in successful opperation in the Counties of Genesee, Livingston and Monroe for three years past, and it is confidently recommended by the following highly respectable Farmers:—

L A Ward, Samuel P St. John, W H Steels, G W Stevens, E L Arnent, Elijah Wilcox, E W Porter, Gideon Osborn, James D Mc Curdy, J H Cornelius, Dyer Kingsley, Michael Dusbrach, W S Fullerton, R W Fitch, Jas. Hutchinson, Agent for James Wadsworth, Frederick Marshall, Egbert Coleman, James Abbott, Wm H Reynale, Luther Melion, Leander Bevery, S R T Wood, Darius Markham, J P Price, Wm Wells, Henry Wagoner, Othinal Bagler, Henry Kelsey, J T Beach, Joseph Bowers, W F Rees, P W Clark, Cyrus Jones, Eli Bullock, Dansville.

—

MR. LOCKLING—Sir, We hereby certify that we have used the Lockling Patent Plough, for some time and can safely recommend it to the consideration of the Farming Community as being the best article of the kind we have ever used. It turns a clean handsome furrow, and draws one-third easier than any Plough within our knowledge.

Judge Roseburgh, Groveland; Ezra Roseburgh, Brighton, Isaac Moore, do.; John Nutt Mt. Hope, John Stanley, do.; W H Scott, Geneseo, Gen. D McNair, do.; Horace Miller Mt Morris.

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To N. LOCKLING, Esq. Hermitage, May 4, 1838.

Dear Sir—I consider your Lockling Patent Plough a perfect article. It runs deep and light, and makes a fine large furrow. I think it well worthy the attention of all farmers. Yours truly,

ANDREW JACKSON.

—

☞ It is warranted to run with one-third less labor, in any kind of ploughing than any other Plough now in existence.

JOSEPH LEE, General Agent,
June 10-w8m3t 41 Exchange-st, near the canal, Rochester.

Silk Worm Eggs.

FOR Sale, 100,000 Silk Worm Eggs, by ELLWANGER & ROGERS, Greenhouse, corner of Buffalo and Sophia streets, Rochester. August 3, 1839.-w3t

Green's Straw Cutter.

THE subscriber having obtained the agency for the sale of Green's Patent Straw Cutter, (of C. G. Jones, Esq. of Lockport, the manufacturer,) will have the same on hand at his store, No. 3 Exchange-street, Rochester, Monroe county, N. Y.

All orders, with amount enclosed, (25 dollars,) (price is reduced,) will meet prompt attention.

I will attend to the shipment of them for any part of the United States. EBENEZER WATTS.

Rochester, August 3, 1839.-w1t-m3t

Farmers save your own Clover Seed.

THE subscribers having purchased the exclusive right of making, using and vending, in the counties of Monroe and Niagara, RITTENHOUSE'S PATENT CLOVER MILL, being the latest improvement, and the article now used in Pennsylvania and in Seneca county, would respectfully inform the farmers of those counties, that they will this fall furnish one or more PORTABLE MILLS in each of said counties, to be worked by horse power, which they will take to farmer's barns whenever required, and hull out their CLOVER SEED for them at the very cheap rate of One Dollar per bushel.—These machines will hull from one to three bushels per hour, according to the quality of the chaff. FARMERS will at once perceive the vast saving and convenience afforded to them by this invention, as instead of paying from SIX to SIXTEEN Dollars per bushel for their Clover Seed, and perhaps getting a quantity of Canada Thistle or other foul seed in the bargain, they can now save their own seed, know that it is clean, and have it hulled at their own barns, for the trifling expense of One Dollar per bushel!

For further information, application can be made, either personally or by letter, (post paid,) to the subscribers at Gaines, Orleans county. CHANCY WOODWORTH & CO.

July 27, 1839.-w3m-m1t*

Morus Multicaulis.

THE subscriber is prepared to furnish Morus Multicaulis (Mulberry) Trees, in large or small quantities, delivered any time this fall after the first of October. The trees will be raised from Roots, Layers and Cuttings, of thrifty growth and matured wood, and will be sold at prices in proportion to their size. October and November are the most favorable months to transport them to the Western States, or into Canada, or in any direction where they must be sent a distance by water communication. All orders from a distance, by mail, should be sent early, (post paid,) addressed to

E. H. MIX,
July 27, 1839.-w6m Avon, N. Y.

Saxony Ewes.

THE Subscribers will let for a term of years, to responsible farmer, fifteen hundred Ewes, in lots of fifty or upwards, to be taken after weaning their lambs.

These Sheep belong to the White Springs flock, which is well known to be as fine as any in the country.

Terms made known on applicatton to either of the subscribers.

ROBERT C. NICHOLAS,
Geneva, July 6, 1839.-w3m JOHN NICHOLAS.

Agricultural Warehouse and Seed Store.

79 Barclay-street, New-York.

AT this old established stand, the subscribers take pleasure in announcing to the public, that they have made extensive arrangements to accommodate farmers in all articles connected with husbandry, viz:—Agricultural implements, a full and fresh supply of Field and Garden Seeds, Fruit Trees, Durham Cattle, Chinese and Berkshire pigs, 10,000 Morus multicaulis Mulberry trees; Publications on Rural subjects, &c.

Published here the Rural Library, S. Fleet, editor, a few copies of 1st vol. for sale. The object of this work is to constitute a Library at the least possible expense. 2d vol., commencing with Professor Low's Elements of Practical Agriculture, with nearly 250 fine engravings; subscription $3. Subscriptions received for the Genesee Farmer, Cultivator, &c. &c. J. W. WEAVER & CO.

April 20-wm1y 76 Barlay-st, New-York

GRINDSTONES,

OF a Superior quality and warranted. If they do not answer the expectations of the purchaser, they may be returned and the money refunded. For sale at the Rochester Edge Tool Manufactory, office on Front Street, a few rods north of Main Street bridge.

june 29-w3m-m1t D. R. BARTON.

Great Sale of Improved Short Horn Cattle, and Blood Horses.

THE subscribers will sell at Auction, on Tuesday, the 10th day of September next, at the farm of Samuel Allen, on the Niagara river, two miles below Black Rock, the entire stock of Improved SHORT HORN CATTLE, for several years past bred on the farm of L. F. ALLEN, on Grand Island.

The herd consists of about 30, including COWS, BULLS, HEIFERS and CALVES. Several of them have been imported by one of the subscribers direct from England, and with their produce, are surpassed by few animals in the country. In addition to these, every animal offered is the direct descendant of thorough bred imported stock, and of unquestionable purity of blood.

With the above will be sold, 20 select and beautiful animals, consisting of pure DEVON; crosses of different degrees between the Devon and Improved Short Horn; crosses of the Alderney, and of the Ayrshire, with the Short Horn. These are cows, heifers and calves; all superior animals.

ALSO—The superb Horse "BELLFOUNDER," (got by Imported "Bellfounder," the best thorough bred trotting horse ever in America, and out of the imported Mare "Lady Allport," bred by T. T. Kissam, Esq. of Long Island. The stock of this horse is unsurpassed in the country for size, speed and action. Together with several elegant THOROUGH BRED BREEDING MARES, and Fillies, and two or three young horse Colts, the produce of the above. These animals are of the highest character as roadsters; and as trotters, no blood in the country has excelled them. They are all from the best stables of Long Island. Also, a beautiful pair of full bred matched Fillies, 5 years old. All these horses are blood bay.

This entire stock will be sold without reserve to the highest bidder, commencing at 10 o'clock, A. M. They can be shipped within an hour from the farm on board the steamboats to go up the lakes, or on board the canal boats at the farm. Catalogues of the animals, with descriptions and pedigrees, will be prepared, and the stock may be viewed at the farm previous to the sale.

A credit of 60 days will be given on approved notes, or acceptances, payable at a bank either in Buffalo, Albany, or New-York, for all sums over $300. LEWIS F. ALLEN.

Black Rock, N. Y. June 25, 1839. SAMUEL ALLEN.

Superior Grindstones,

AND warranted. They are from the celebrated quarry at Berea, Ohio. If they do not answer the expectations of the purchaser, they may be returned and the money refunded. Be particular to enquire for "*Berea Grindstones.*" For sale wholesale and retail.

D. M. VANDERPONL,
No. 17, Webster's Buildings, Main street.
Buffalo, N. Y. July 20, 1839.-w3t.

Horse Rakes.

AS some inquiry has been made through this paper relative to Horse Rakes, the subscriber would take this opportunity to say to its patrons, and all others, that he is offering to the public the latest improved Revolving Horse Rake, which can be had at the following places:

Rochester—C. Hendrix. *Auburn*—Hyell, Watrous & Co. *Elmira*—Robert Cevell, jr. & Co. *Burdett*—E. Baker & Co. *Ovid*—P. Himrod & Son. *Geneva*—H. G. Bushnell. *Waterloo*—J. L. Lundy & Co. *Seneca Falls*—J. C. Chapman. *Geddes*—S. H. Mann. *Syracuse*—Wright & Wheaton. *Ithaca*—Wm. R. Collins. *Lenox*—Horace Hall. *Chittenango*— —— Crouse; and many other places not here mentioned.

Those who wish to purchase, would do well to give us a call.

AMOS HOLBROOK.
Whitesboro', June 12, 1839. jun 24

Fruit Trees for Sale.

THE subscriber respectfully informs his friends and the public that he has for sale at his Nursery in Rochester, Monroe county state of New York, a large quantity of Fruit Trees, grafted and inoculated with the most approved kinds, now fit for transplanting, which he will sell on the most reasonable terms.

April 15, 1838. SAMUEL MOULSON.

N. B. Cash will be paid for a few thousand two years old APPLE TREES.

Great and Timely Arrivals!

AT THE ROCHESTER SEED STORE.—The subscriber is happy to inform his friends and customers, that he has just received direct from England, a very large supply of imported Seeds, of such kinds, and in such quantities, as will meet the demands of the public, and of such quality as cannot fail to give satisfaction. Among them are,

1,500 lbs. English Purple Top Ruta Baga,
800 lbs. English and Scotch assorted Turnep,
650 lbs. Mangel Wurtzel,
300 lbs. French White and Yellow Sugar Beet,
175 lbs. Long Orange, and Altringham Carrot,
150 lbs. Yellow Dutch, and White Portugal Onion,
500 lbs. Cabbage, Cauliflower, Broccoli, and Radish,
450 lbs. White Dutch Clover, Trifolium Incarnatum.

Also—New Orchard Grass, Pacey's perennia and Italian Rye Grass, Spring Tares, Potatoe Oats, Winter Oats, many new varieties of Peas and Beans, together with a multitude of smaller articles.

Also—Nearly one hundred varieties of the choicest English FLOWER SEEDS. (These will speedily be put up in small papers, price 5 cents each, 50 cents per dozen.)

Also—Just received, a good supply of THORBURN'S CHINESE TREE CORN, and ROHAN POTATOES.

Orders already received will be immediately attended to.

All orders from a distance must contain a remittance, or good reference in this city.

☞ Agents will receive new supplies as soon as possible.

May 1, 1839. M. B. BATEHAM.

☞ *Oswego Agency.*—M. B. ENSON, Druggist, Oswego, is Agent for the Rochester Seed Store. A good assortment of Seeds may be found there.

Monroe Horticultural Garden and Nursery,

GREECE, MONROE COUNTY, N. Y.

THIS establishment now comprises over 20 acres, covered compactly with trees and plants in different stages of their growth.

The subscriber offers to the public a choice selection of Fruit Trees, of French, German, English and American varieties, consisting of Apples, Pears, Plums, Peaches, Cherries, Apricots, Nectarines, Quinces, Currants, Gooseberries, Raspberries, Grape Vines, Strawberries, Ornamental Trees, Shrubs, Plants, Hardy Roses, Vines, Creepers, Herbaceous Perennial Plants, Bulbous Roots, Splendid Paeonies, Double Dahlias, &c. &c.

Also, a large collection of Green House Plants, of choice and select varieties, in good condition.

Orders respectfully solicited. Trees and Plants, when ordered, are carefully selected and faithfully packed, and if desired, delivered on the Canal, one mile from the Nursery, or at Rochester.

Orders for Mr. Rowe's Nursery received by the publisher of this paper.

Catalogues will be sent to every applicant, gratis, or may be had by calling at the office of the Genesee Farmer.

April 1, 1838. ASA ROWE.